

CLAIM AMENDMENTS

Claim 1 (currently amended). Apparatus for carrying out mass transfer processes with A high-viscosity liquids, comprising at least one vertically disposed vessel having a feed distributor for the liquid to be treated, an outlet for volatile components and an outlet for the treated liquid, the ~~the~~ feed distributor having a multiplicity of orifices for subdividing the high-viscosity liquid to be treated into a multiplicity of individual streams, wherein essentially vertically arranged wire loops, each of which encloses an area of from 0.5 cm² to 2500 cm², are disposed in the vicinity of the orifices, along which wire loops the high-viscosity liquid runs off under the action of gravity.

Claim 2 (previously presented). Apparatus according to Claim 1, wherein the feed distributor is a perforated plate.

Claim 3 (previously presented). Apparatus according to Claim 1, wherein the feed distributor element comprises at least one horizontally arranged tube which has orifices pointing downwards, upwards or both.

Claim 4 (previously presented). Apparatus according to Claim 1, wherein the wire loops in the vicinity of the orifices in the feed distributor are disposed detachably.

Claim 5 (currently amended). Apparatus according to Claim 3, wherein said ~~orifices~~ orifices are slotted orifices pointing upwards.

Claim 6 (previously presented). Apparatus according to Claim 5, wherein the wire loops are clipped into said orifices.

Claim 7 (currently amended). Apparatus according to Claim 1, wherein at least two, ~~three or more~~ of the wire loops at a time are combined into a ~~basket-like~~ lattice or wire mesh in the form of a basket.

Claim 8 (currently amended). Apparatus according to Claim 7, wherein at least two ~~or more~~ adjacent lattices or wire meshes are linked to one another.

Claim 9 (previously presented). Apparatus according to Claim 1, wherein the wire loops are attached to the vessel bottom.

Claim 10 (previously presented). Apparatus according to Claim 1, wherein the wire loops comprising heaters for the wire loops.

Claim 11 (previously presented). Apparatus according to Claim 1, wherein the feed distributor is formed of heat exchange tubes which are vertically arranged in the vessel, debauch into the vessel and have orifices, the wire loops being attached to the bottom ends of said heat exchange tubes.

Claim 12 (canceled).

Claim 13 (previously presented). Apparatus according to Claim 1, wherein the wire loops taper in the direction of flow of the liquid.

Claim 14 (previously presented). Apparatus according to Claim 1, wherein the vessel is designed to be heatable, coolable or both.

Claim 15 (previously presented). Apparatus according to Claim 1, wherein the top ends of individual wire loops are disposed at different orifices.

Claim 16 (currently amended). Apparatus according to Claim 1, wherein one wire lattice, or ~~more~~ a plurality of wire lattices essentially arranged horizontally above one another, are additionally provided below the orifices.

Claim 17 (currently amended). A method for boiling down and devolatilizing high-viscosity liquids and for carrying out chemical reactions between liquid layer and a surrounding gas space which contains a reactive gas component, and for condensation reactions which comprises carrying out said boiling down and devolatilizing, or said reactions in an apparatus ~~according to Claim 1~~ comprising at least one vertically disposed vessel having a feed distributor for the liquid to be treated, an outlet for volatile components and an outlet for the treated liquid, the feed distributor having a multiplicity of orifices for subdividing the high-viscosity liquid to be treated into a multiplicity of individual streams, wherein essentially vertically arranged wire loops, each of which encloses an area of from 0.5 cm² to 2500 cm², are disposed in the vicinity of the orifices, along which wire loops the high-viscosity liquid runs off under the action of gravity.

Claim 18 (previously presented). Apparatus according to Claim 10, wherein said heaters are electrical resistance heaters in the wire loops.

Claim 19 (previously presented). Apparatus according to Claim 13, wherein said wire loops form an acute angle at their bottom ends.

Claim 20 (previously presented). Apparatus according to Claim 14, wherein said vessel is provided with a heat exchange jacket.

Claim 21 (previously presented). Apparatus according to Claim 20, wherein said heat exchange jacket comprises an electrical heater.

Claim 22 (previously presented). Apparatus according to Claim 20, wherein said heat exchange jacket is adapted to accomodate the flow of a heat transfer medium therethrough.